

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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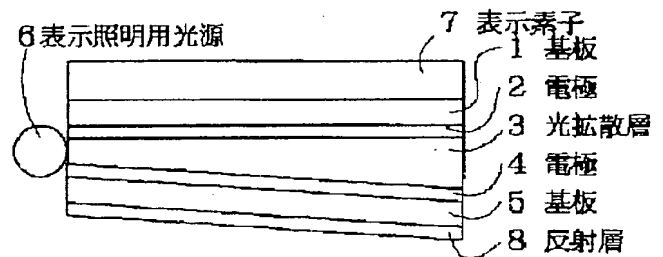
APPLICATION DATE : 22-05-92  
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APPLICANT : SEIKO EPSON CORP;

INVENTOR : KOBAYASHI HIDEKAZU;

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TITLE : LIGHT DIFFUSION PLATE



ABSTRACT : PURPOSE: To make display easily visible by the effective utilization of external light and a light source for display illumination within a device and simultaneously to make the display part thin and light and to reduce electric power consumption by mixing and polymerizing a liquid crystal and high-polymer precursor to diffuse the liquid crystals and the high-polymer with each other.

CONSTITUTION: PN002 as the liquid crystal and photopolymerizable acrylate as the high-polymer precursor are mixed at a prescribed ratio as the material for a light diffusion layer 3. A cell to be sealed with the mixture is constituted by disposing two sheets of substrates 1, 5 with electrodes (the electrodes are not required if the degree of light diffusion is not to be changed by an electric field) opposite to each other so as to have a prescribed spacing on the side disposed with a light source 6 for illuminating the display. The thickness at which light is made incident and is diffused uniformly over the entire surface is adjusted. A reflection plate 8 (more preferably nondirection plate) is disposed on the rear surface of the cell worked in such a manner. The mixture composed of the liquid crystal and the high-polymer precursor is sealed into this cell and is irradiated with light at an isotropic phase to cause the phase sepn. of the liquid crystal and the high polymer, by which the clouded light diffusion plate is formed.

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